

AMENDMENTS

In the claims:

This Listing of Claims replaces all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A Bluetooth-IP access system, comprising:

a Bluetooth-IP access device for searching and storing information regarding nearby access points including Bluetooth addresses;

a Bluetooth terminal for accessing the access points by receiving the information regarding nearby access points including clock offset information, or by searching and storing the information; and

a communication link for connecting said Bluetooth-IP access device and said Bluetooth terminal,

wherein ~~mutual~~ a search is ~~required~~ performed by using said communication link, ~~and~~ Bluetooth addresses of nearby access points are provided to said Bluetooth terminal by using said communication link, and said Bluetooth-IP access device includes a search support module, said search support module including:

a database having Bluetooth address information and 2nd to 16th clock bit information in said clock offset information of said nearby access points, and

a module calculating said clock offset,

wherein selective search response of said clock offset information is performed in

accordance with a search request of said Bluetooth terminal.

2. (Original) The device as claimed in claim 1,

wherein said communication link is a Bluetooth ACL link.

3. (Original) The device as claimed in claim 1,

wherein said information regarding said nearby access points further includes
clock_offset information.

4. (Cancelled)

5. (Currently Amended) The device as claimed in claim 1,

~~wherein said Bluetooth-IP access device includes a search support module, and the search
support module includes,~~

~~a database having Bluetooth address information and second to 16th clock bit information
among said clock_offset information of said nearby access points, and~~

~~a module calculating said clock_offset, and~~

~~a selective search for the clock_offset information is sent requested to the Bluetooth-IP
access device.~~

6. (Currently Amended) The device as claimed in claim 1,

wherein a hardware of said Bluetooth-IP access device includes,

a main operation means in charge of operation within said Bluetooth-IP access device;

a register setting means for setting the hardware state within said Bluetooth-IP access device through said main operation means;

a static data storage for storing data and program module needed for booting said Bluetooth-IP access device and read by said main operation means;

a HCI communication means for bi-directional communication between said main operation means and a plurality of Bluetooth-IP access devices;

a first electrical connection means for electrically connecting said HCI communication means and said main operation means; and

a second electrical connection means for electrically ~~connection~~connecting said HCI communication means and said Bluetooth-IP access device.

7. (Currently Amended) The device as claimed in claim 1,
wherein a software of said Bluetooth-IP access device includes,
a boot loader for performing hardware initialization when the hardware is reset,
performing specific program, and supplying information of said specific program;
an operating system operated by using said program information supplied from said boot loader;
an initialization script for automatically initializing and driving desired software and hardware module by said operating system; a software of HCI communication device for controlling said HCI communication device;
a Bluetooth HCI software and a Bluetooth protocol stack satisfied with at least specification 1.0 B; and
a module for supporting fast search, having a database consisted of Bluetooth addresses

of nearby access points, and an automation means needed for fast search request and/response.

8. (Currently Amended) The device as claimed in claim 1,
wherein a hardware of said Bluetooth terminal includes,
a main operation means in charge of operation within said terminal;
a register setting means for setting the hardware state within said Bluetooth-IP access device through said main operation means;
a static data storage for storing data and program module needed for booting said Bluetooth-IP access device and read by said main operation means;
a dynamic data storage for storing data and program module needed for operating said Bluetooth-IP access device and read and written by said main operation means;
a HCI communication means for bi-directional communication between said main operation means and a plurality of Bluetooth-IP access devices;
a first electrical connection means for electrically connecting said HCI communication means and said main operation means; and
a second electrical connection means for electrically ~~connection~~connecting said HCI communication means and said Bluetooth-IP access device.

9. (Currently Amended) The device as claimed in claim 1,
wherein a software of said Bluetooth terminal includes,
a boot loader for performing hardware initialization when the hardware is reset,
performing specific program, and supplying information of said specific program;
an operating system operated by using said specific program information supplied from

said boot loader;

an initialization script for automatically initializing and driving desired software and hardware module by said operating system;

a software of HCI communication device for controlling said HCI communication device;

a Bluetooth HCI software and a Bluetooth protocol stack satisfied with at least specification 1.0 B; and

a module for supporting fast search, having a database consisted of Bluetooth addresses of nearby access points, and an automation means needed for fast search request and response.

10. (Original) The device as claimed in claim 9,

wherein said automation means performs selective fast search request and selective fast search response.

11. (Original) The device as claimed in claim 6,

wherein said HCI communication means includes an USB host interface of at least one port.

12. (Original) The device as claimed in claim 6,

wherein said HCI communication means includes an UART host interface of at least one port.

13. (Original) The device as claimed in claim 6,

wherein said HCI communication means includes an Ethernet interface of at least one port.

14. (Original) The device as claimed in claim 6,
wherein said first electrical means includes a chip selector, a data bus, an address bus,
and an interrupt means.

15. (Original) The device as claimed in claim 6,
wherein said second electrical means includes USB cables with the lengths of $0, \sqrt{2}\alpha/2$
where α is the shortest neighbor distance in the case that AP's are uniformly and squarely
distributed.

16. (Original) The device as claimed in claim 15,
wherein said second electrical means includes an USB hub means of at least one port.

17. (Original) The device as claimed in claim 8,
wherein said HCI communication means includes an USB host interface of at least one
port.

18. (Original) The device as claimed in claim 8,
wherein said HCI communication means includes an UART host interface of at least one
port.

19. (Original) The device as claimed in claim 8,
wherein said HCI communication means includes an Ethernet interface of at least one
port.

20. (Original) The device as claimed in claim 8,
wherein said first electrical means includes a chip selector, a data bus, an address bus,
and an interrupt means.

21. (Original) The device as claimed in claim 8,
wherein said second electrical means includes USB cables with the lengths of $0, \sqrt{2}\alpha/2$
where α is the shortest neighbor distance in the case that access points are uniformly and
squarely distributed.

22. (Original) The device as claimed in claim 21,
wherein said second electrical means includes an USB hub means of at least one port.